



Power your day-to-day
when others are
power-less.

Humless Sentinel User's Guide

www.humless.com

User's Guide Contents

- Safety Instructions page 6
- Meet The Power page 7
- Charging Your Unit page 12
- Powering Your Devices page 13
- Troubleshooting page 14
- Technical Specifications page 15



About Humless

Humless, LLC gives you a seamless solution for challenging power outages. Our technology is so advanced that we have no real competitors. There may be other generators available, but none can offer you all of the following:

Safe:

No emissions – none. No dangerous risks unlike fossil fuels and toxic lead-acid batteries (if you can't throw it away in your family's garbage can, it's not good for your family).

Silent:

No more loud, continuous, sanity-challenging generator noises.

Affordable:

The next competitor that compares in power, 1000 watts continuous, costs 3 times more.

Portable:

Easily carried by most, weighing in at 40 lbs. (18 kg.)

Renewable:

Powered and replenished by natural resources such as the sun, wind and water, as well as mechanical devices such as hand cranks.

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Date and Revision

March 2012 Revision A

Product Number

HSS50-120W

Contact Information

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Please feel free to contact us at any time.

Symbols and Terms

The following symbols are used in this guide:



WARNING

Warnings are conditions and practices that could result in personal injury.



CAUTION

Cautions are conditions and practices that could result in damage to the unit or other equipment.

Important Terms

The following terms are helpful for you to know and are used in this guide.

TERM	DEFINITION
A	Ampere or Amp
AC	Alternating Current
DC	Direct Current
kW	Kilowatt; one thousand Watts
LED	Light Emitting Diode
mA	Milliampere; one thousandth of an ampere
PV	Photovoltaic
VAC	Volts AC
VDC	Volts DC
W	Watts

Additional Information

You can find additional information about products and service at www.humless.com.

Safety Instructions



WARNING

This Section provides important safety and operating instructions.



CAUTION

Check with medical device manufacturer before powering any life-support systems or other medical devices or equipment to insure it is compatible with the power supplied by the Humless Sentinel.

See Technical Specifications on page 14 for the Humless Sentinel details.



CAUTION

Check with tool and/or equipment manufacturer before powering any of their products to insure it is compatible with the power supplied by the Humless Sentinel.

See Technical Specifications on page 14 for the Humless Sentinel details.

- Before using your unit, read ALL instructions and information in this user's guide.
- Although intended for indoor use, it can be used outdoors if sheltered. DO NOT expose the unit to rain, snow or extreme environments. To reduce risk of fire hazard, DO NOT cover or obstruct fan vents. Provide a minimum of 6 inches of clearance on all sides of the unit; otherwise, overheating could occur.
- You may connect as many as 3 DC power sources and 1 AC power source simultaneously.
- To reduce risk of electrical shock, disconnect all sources of AC and DC from the unit before attempting any cleaning or maintenance or before working on any circuits connected. SWITCHING OFF ALL POWER DISCHARGE PORTS WILL NOT ELIMINATE RISK. TURN OFF MAIN POWER AND REMOVE RED KEY.
- Inspect all power cords before attempting to charge your unit and connecting devices to discharge ports. If cords are frayed, damaged or questionable, DO NOT connect the device to your unit. Doing so increases the risk of fire and electrical shock. Use common sense.
- DO NOT use if your unit has been dropped or damaged in any way. If damaged, see 'Contact Information' on page 2.
- DO NOT attempt to disassemble the unit. There is a high risk of unit damage as well as personal injury. There are NO serviceable parts.
- Repairs should ONLY be done by a qualified Humless repair technician.

Meet the Power

Thank you for your purchase. The pure sine wave AC inverter output makes your unit compatible for use with many of today's high-tech electronic devices. It also allows appliance motors to operate more efficiently and at cooler temperatures.

In order to get the most from your unit, be sure to carefully read this user's guide. It is important to take some time to become familiar with the *Safety Instructions* on page 6 of this guide before operation.

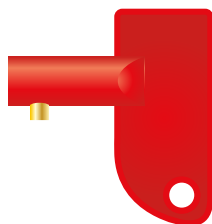
If you still have any questions, please contact our support team.

See Contact Information on page 4.

Let's Get Started

You should have received the following items in your Humless Sentinel kit:

1. Unit with carrying harness
2. Shoulder Strap
3. Zippered stow pack (1)
4. AC wall outlet charging cord
5. Red Key (2)
6. USB Universal cell phone charger
7. USB LED light

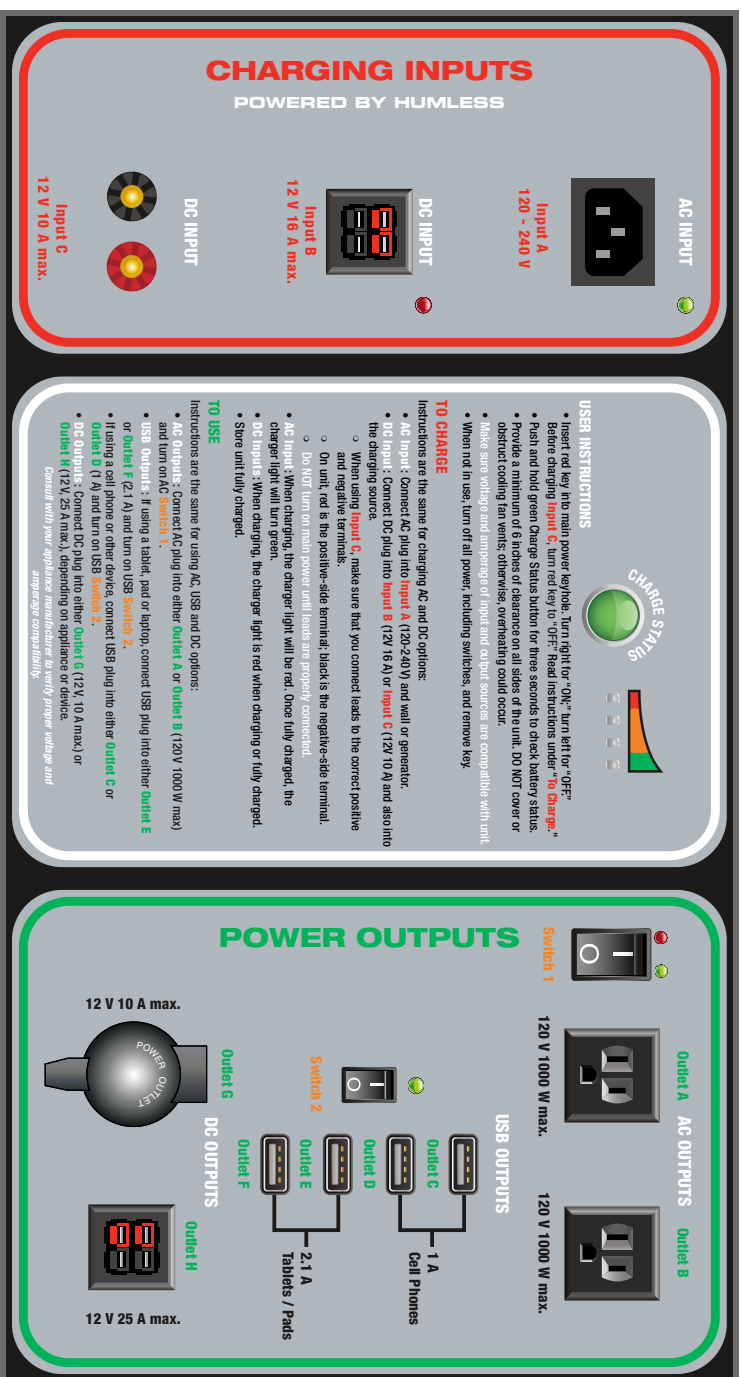


Red Key
for Main
Power

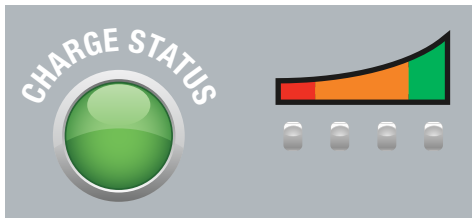
Things to remember:

- When not in use, turn off all power, including switches, and remove key.
- Store unit fully charged.

Interface Panel



Charge Status Indicator



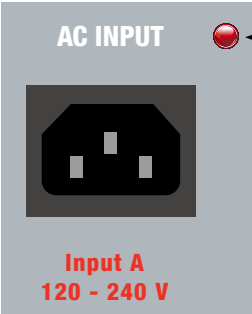
Press and hold **green** button three seconds to obtain an accurate reading.

FULL CHARGE STATUS is indicated when all four LEDs are illuminated and AC and DC charge lights in Charging Inputs section show green.

AC Charging **Input A**



WARNING Electrical Shock can occur if AC power cord is damaged or frayed. Never use a damaged or frayed AC power cord. Replace with a new cord before proceeding with AC charging.



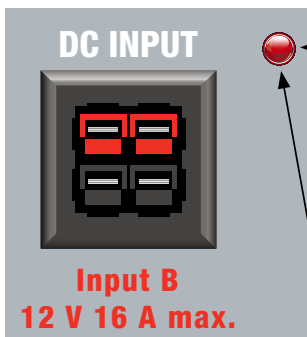
AC INPUT light is **red** while charging.

AC INPUT light is **green** when fully charged.

DC Charging **Input B** and **Input C**

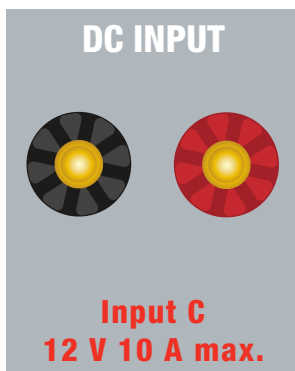


WARNING Electrical Shock can occur if DC power cord is damaged or frayed. Never use a damaged or frayed DC power cord. Replace with a new cord before proceeding with DC charging.



DC Charge light is **red** while charging.


DC Charge light is **green** when fully charged.



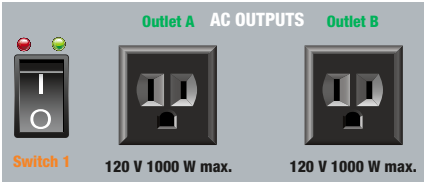
DC Charge light is **red** while charging.

DC Charge light is **green** when fully charged.

AC Usage Outlets



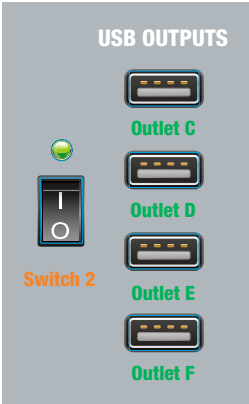
WARNING Electrical Shock can occur if AC power cord is damaged or frayed. Never use a damaged or frayed AC power cord. Replace with a new cord before proceeding with AC charging.



A green light indicates power is present - normal operation.

A red light indicates fault, low battery, or overload.

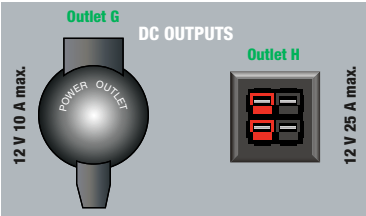
4 USB Outlets



A green light indicates power is present - normal operation.

Check with your device manufacturer for proper power requirements and compatibility.

DC Outlets



There is no light indicator for these ports.

Check with your device manufacturer for proper power requirements and compatibility.

Charging Your Unit

User Instructions

- Insert red key into keyhole. Turn right for “ON;” turn left for “OFF.” Do not turn on unit first when charging with **Input C**. Read instructions under “**To Charge**.”
- Push and hold green button for three seconds to check battery status.
- When not in use, turn off all power, including switches, and remove key.

To Charge

- Provide a minimum of 6 inches of clearance on all sides of the unit. DO NOT cover or obstruct cooling fan vents; otherwise, overheating could occur.
- Insert red key into ON/OFF keyhole. Turn right for “ON;” turn left for “OFF.”
- MAKE SURE **VOLTAGE** AND AMPERAGE OF BOTH CHARGING SOURCE AND UNIT ARE COMPATIBLE.
- Instructions are the same for charging AC and DC options:
- **AC Input:** Connect AC plug into **Input A** (120-240 V) and wall/generator.
- **DC Input:** Connect DC plug into **Input B** (12V 16 A) or **Input C** (12V 10 A) and also into the charging source.
 - When using **Input C**, make sure that you connect leads to the correct positive and negative terminals.
 - On unit, red is the positive-side terminal; black is the negative-side terminal.
 - WAIT TO TURN ON POWER WITH RED KEY UNTIL LEADS ARE CONNECTED.
- **AC Input:** When charging, the charger light will be red. Once fully charged, the charger light will turn green.
- **DC Inputs:** When charging, the charger light is red when charging or fully charged.
- Store unit fully charged.

Consult with your power source manufacturer to verify proper voltage and amperage compatibility.

Power Your Device

To Use

- Provide a minimum of 6 inches of clearance on all sides of the unit. DO NOT cover or obstruct cooling fan vents; otherwise, overheating could occur.
- Insert red key into ON/OFF keyhole. Turn right for “ON;” turn left for “OFF.”
- MAKE SURE VOLTAGE AND AMPERAGE OF BOTH CHARGING SOURCE AND UNIT ARE COMPATIBLE.
- Instructions are the same for using AC, USB and DC options:

AC Outputs:

- Connect AC plug into either **Outlet A** or **Outlet B** (120 V 1000 W max) and turn on AC **Switch 1**.

USB Outputs:

- If using a tablet, pad or laptop, connect USB plug into either **Outlet C** or **Outlet D** (2.1 A) and turn on USB **Switch 2**.
- If using a cell phone or other device, connect USB plug into either **Outlet E** or **Outlet F** (1 A) and turn on USB **Switch 2**.

DC Outputs:

- Connect DC plug into either **Outlet G** (12 V, 10 A max.) or **Outlet H** (12 V, 25 A max.), depending on appliance or device.
- When not in use, turn either **Switch 1** or **Switch 2** off and turn the red key to the left.

Consult with your appliance manufacturer to verify proper voltage and amperage compatibility.

Troubleshooting Your Unit

1. The Charge Status Indicator won't light up when I push the green button.

- Make sure red key is inserted into the Main Power keyhole and it is turned to the "ON" position.
- Battery is below cutoff voltage – charge battery.

2. The red light above Switch 1 on the 120V AC Outlet lights up and there is no power from outlet.

- Battery is low. Check charge state and recharge battery.
- Load is too high. Turn down appliance or make sure appliance power ratings are less than 1000W.
- Inverter overheating. Create space around vents and allow inverter fan to cool the inverter.

3. The Charge Status Indicator lights give different readings at different times without charging or using any stored power.

- Charge Status Indicator provides approximate charge status only.
- Battery pack voltage will settle after charging.

4. DC Input charging light will not light up, even though my charging source is plugged in.

- Make sure red key is inserted into the Main Power keyhole and it is turned to the "ON" position.
- Input polarity is reversed. Reverse input polarity.
- Charging source voltage is less than your battery voltage – try a different charging source.

5. 12V DC Outlet won't work.

- Make sure red key is inserted into the Main Power Switch and it is turned to the "ON" position.
- Battery is below cutoff voltage – charge battery.

Technical Specifications

Product Specifications:

Dimensions (L x W x H): 18" x 10" x 12"

Weight: 40 lbs.

Internal Lithium Battery Pack:

Voltage: 12.8V

Capacity: 50Ah (600Wh)

Cycle life: 2,000+ cycles

Minimum charge time: < 2.5 hrs

Charge retention: >12 months

Internal Inverter:

Output: 120V AC Pure Sine Wave 1000W Continuous

2000W Peak Integrated AC Charger

Output: PWM 14.6V DC 5.0A

Charging cycles: CC-CV

Charge time 2.5 hrs.

Integrated Charge Controller/BMS:

Input current: 15.0A

Output current: 10.0A

Low voltage cutoff: 10.5V

High voltage cutoff: 15.0V

Outputs:

(2) 120V AC (1000W/2000W Continuous/Peak)

(2) USB Outlets 5V DC @ 2100 mA Max

(2) USB Outlets 5V DC @ 1000 mA Max

(2) 12V DC @ 10A Max (120W)



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